

an inner medical element having a distal end portion extending [distally] proximally from the distal end of the inner medical element, said distal end portion [being] of the inner medical element adapted to be fixed in a second curve such that [the longitudinal axis of] the distal end portion of the inner medical element is disposed substantially out of the first plane during a period of time sufficient to permit medical use of at least one of the catheter tube and the inner medical element.

2. The combination catheter as set forth in claim 1 wherein the inner medical element is fixed rotationally with respect to the catheter tube.

3. The combination catheter as set forth in claim 1 wherein at least one of the catheter tube and the inner medical element have curves preformed in their distal end portions.

4. The combination catheter as set forth in claim 1 wherein at least one of the catheter tube and the inner medical element are remotely controllable to fix curves in their distal end portions.

5. The combination catheter as set forth in claim 1 wherein said first curve has a first radius of curvature and the second curve has a second radius of curvature, both curves being disposed a distance from the respective distal ends of the catheter tube and the inner medical element not substantially greater than three times the smaller of the first and second radii of curvature.

6. (Amended) The combination catheter as set forth in claim 1 wherein the first plane is disposed at an angle of substantially ninety degrees with respect to [the] a second plane formed by the distal end portion of the inner medical element.

7. The combination catheter as set forth in claim 1 wherein said first curve has a first arc length and said second curve has a second arc length, each curve being disposed from the

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distal end of its corresponding tube or element respectively a distance no greater than three times the smaller of the first and second arc lengths.

10. (Amended) The method of forming the shape of a combination catheter

comprising:

disposing a catheter tube in a human body, said catheter tube having a distal end portion fixed in a first curve such that [the longitudinal axis of] the distal end portion of the catheter tube defines a first plane;

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disposing an inner medical element in the catheter tube, said inner medical element having a distal end portion;

fixing the distal end portion of the inner medical element in a second curve such that [the longitudinal axis of] the distal end of the inner medical element is disposed substantially out of the first plane for a period of time sufficient to permit medical use of at least one of the catheter tube or the inner medical element;

medically using at least one of the catheter tube or the inner medical element while the distal end of the inner medical element is disposed substantially out of the first plane.

11. The method as set forth in claim 10 further including fixing the inner medical element rotationally with respect to the catheter tube.

12. The method as set forth in claim 10 wherein at least one of the catheter tube and the inner medical element have curves preformed in their distal end portions.

13. The method as set forth in claim 10 wherein at least one of the catheter tube and the inner medical element are remotely controllable to form curves in their distal end portions.

14. The method as set forth in claim 10 wherein the first curve has a first radius of curvature and the second curve has a second radius of curvature, both curves being disposed a

distance from the respective distal ends of the catheter tube and the inner medical element not substantially greater than three times the smaller of the first and second radii of curvature, further including the step of separating the first and second curves in operation by no more than three times the smaller of the first and second radii of curvature.

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15. (Amended) The method as set forth in claim 10 wherein the second curve defines a second plane, the first plane [is] being fixed at an angle of approximately ninety degrees with respect to the second plane.

16. The method as set forth in claim 10 wherein the first curve has a first arc length and the second curve has a second arc length, each curve being disposed from the distal end of its corresponding tube or element respectively a distance no greater than three times the smaller of the first and second arc lengths, further including the step of separating the first and second curves in operation by no more than three times the smaller of the first and second arc lengths.

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19. (Amended) The method of using a combination catheter having a catheter tube and an inner medical element, said combination catheter having a proximal end and a distal end, the method comprising:

disposing a catheter tube in a human body, said catheter tube having a distal end portion fixed in a first curve such that the distal end portion of the catheter tube defines a first plane;

disposing an inner medical element in the catheter tube, said inner medical element having a distal end;

forming the combination catheter into a shape in which the distal end of the combination catheter is disposed substantially out of the first plane for a period of time sufficient to permit medical use of at least one of the catheter tube or the inner medical element.

20. The method of using a combination catheter as set forth in claim 19 further including the step of positioning the combination catheter in a desired position, and using the combination catheter in a medical procedure while the distal end of the combination catheter is disposed substantially out of the first plane.

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21. The method of using a combination catheter as set forth in claim 20 further including the step of reforming the distal end of the combination catheter into a substantially different shape.

22. The method of using a combination catheter as set forth in claim 21 further including the step of using the combination catheter in a medical procedure while the distal end of the combination catheter is in the reformed shape.

Please add the following new claims:

23. The combination catheter as set forth in claim 1 further including means for proximally fixing the distal end portion of the inner medical element in the second curve.

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24. The method as set forth in claim 19 further including proximally fixing the distal end of the combination catheter substantially out of the first plane.

25. The combination catheter as set forth in claim 1 further including means for proximally fixing the inner medical element against translation and rotation with respect to the catheter tube.

26. The method as set forth in claim 19 further including proximally fixing the inner medical element against translation and rotation with respect to the catheter tube.

27. A combination catheter comprising:
a catheter tube having a distal end portion fixed in a first curve such that the distal end portion of the catheter tube defines a first plane;

an inner medical element having a distal end portion extending proximally from the distal end of the inner medical element, said distal end portion of the inner medical element adapted to be fixed in a second curve such that the distal end portion of the inner medical element is disposed substantially out of the first plane; and

means for proximally fixing the inner medical element against translation and rotation with respect to the catheter tube.

28. The method of using a combination catheter having a catheter tube and an inner medical element, said combination catheter having a proximal end and a distal end, the method comprising:

disposing a catheter tube in a human body, said catheter tube having a distal end portion fixed in a first curve such that the distal end portion of the catheter tube defines a first plane;

disposing an inner medical element in the catheter tube, said inner medical element having a distal end;

forming the combination catheter into a shape in which the distal end of the combination catheter is disposed substantially out of the first plane for a period of time sufficient to permit medical use of at least one of the catheter tube or the inner medical element; and

proximally fixing the inner medical element against translation and rotation with respect to the catheter tube.

29. The method of using a combination catheter having a catheter tube and an inner medical element, said combination catheter having a proximal end and a distal end, the method comprising:

disposing a catheter tube in a human body, said catheter tube having a distal end portion fixed in a first curve such that the distal end portion of the catheter tube defines a first plane;

disposing an inner medical element in the catheter tube, said inner medical element having a distal end;

forming the combination catheter into a first shape in which the distal end of the combination catheter is disposed substantially out of the first plane for a period of time sufficient to permit medical use of at least one of the catheter tube or the inner medical element;

proximally fixing the inner medical element against translation and rotation with respect to the catheter tube while the distal end of the combination catheter is disposed substantially out of the first plane;

forming the combination catheter into a second shape, different from the first shape, in which the distal end of the combination catheter is disposed substantially out of the first plane for a period of time sufficient to permit medical use of at least one of the catheter tube or the inner medical element;

proximally fixing the inner medical element against translation and rotation with respect to the catheter tube while the distal end of the combination catheter is disposed in the second shape.

30. A combination catheter comprising:

a catheter tube having a distal end portion fixed in a first curve such that the distal end portion of the catheter tube defines a first plane;

an inner medical element having a distal end portion extending proximally from the distal end of the inner medical element, said distal end portion of the inner medical element fixed in a second curve defining a second plane, such that the second plane defined by the distal end portion of the inner medical element is disposed substantially out of the first plane; and

means for proximally fixing the inner medical element against translation and rotation with respect to the catheter tube while the distal end portion of the inner medical element is disposed substantially out of the first plane.

31. The method as set forth in claim 10 wherein the second curve is disposed substantially out of the first plane by rotating the inner medical element with respect to the catheter tube.

32. The method as set forth in claim 19 wherein the forming step includes rotating the inner medical element with respect to the catheter tube.

33. The method as set forth in claim 10 wherein the step of fixing includes proximally fixing the distal end of the combination catheter substantially out of the first plane.

34. The method as set forth in claim 10 wherein the step of fixing includes proximally fixing the inner medical element against translation and rotation with respect to the catheter tube.

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1. A combination catheter comprising:

a catheter tube having a distal end portion fixed in a first curve such that the distal end portion of the catheter tube defines a first plane;

an inner medical element having a distal end portion extending proximally from the distal end of the inner medical element, said distal end portion of the inner medical element adapted to be fixed in a second curve such that the distal end portion of the inner medical element is disposed substantially out of the first plane during a period of time sufficient to permit medical use of at least one of the catheter tube and the inner medical element.
2. The combination catheter as set forth in claim 1 wherein the inner medical element is fixed rotationally with respect to the catheter tube.
3. The combination catheter as set forth in claim 1 wherein at least one of the catheter tube and the inner medical element have curves preformed in their distal end portions.
4. The combination catheter as set forth in claim 1 wherein at least one of the catheter tube and the inner medical element are remotely controllable to fix curves in their distal end portions.
5. The combination catheter as set forth in claim 1 wherein said first curve has a first radius of curvature and the second curve has a second radius of curvature, both curves being disposed a distance from the respective distal ends of the catheter tube and the inner medical element not substantially greater than three times the smaller of the first and second radii of curvature.

6. The combination catheter as set forth in claim 1 wherein the first plane is disposed at an angle of substantially ninety degrees with respect to a second plane formed by the distal end portion of the inner medical element.

7. The combination catheter as set forth in claim 1 wherein said first curve has a first arc length and said second curve has a second arc length, each curve being disposed from the distal end of its corresponding tube or element respectively a distance no greater than three times the smaller of the first and second arc lengths.

10. The method of forming the shape of a combination catheter comprising:

disposing a catheter tube in a human body, said catheter tube having a distal end portion fixed in a first curve such that the distal end portion of the catheter tube defines a first plane;

disposing an inner medical element in the catheter tube, said inner medical element having a distal end portion;

fixing the distal end portion of the inner medical element in a second curve such that the distal end of the inner medical element is disposed substantially out of the first plane for a period of time sufficient to permit medical use of at least one of the catheter tube or the inner medical element;

medically using at least one of the catheter tube or the inner medical element while the distal end of the inner medical element is disposed substantially out of the first plane.

11. The method as set forth in claim 10 further including fixing the inner medical element rotationally with respect to the catheter tube.

12. The method as set forth in claim 10 wherein at least one of the catheter tube and the inner medical element have curves preformed in their distal end portions.

13. The method as set forth in claim 10 wherein at least one of the catheter tube and the inner medical element are remotely controllable to form curves in their distal end portions.

14. The method as set forth in claim 10 wherein the first curve has a first radius of curvature and the second curve has a second radius of curvature, both curves being disposed a distance from the respective distal ends of the catheter tube and the inner medical element not substantially greater than three times the smaller of the first and second radii of curvature, further including the step of separating the first and second curves in operation by no more than three times the smaller of the first and second radii of curvature.

15. The method as set forth in claim 10 wherein the second curve defines a second plane, the first plane being fixed at an angle of approximately ninety degrees with respect to the second plane.

16. The method as set forth in claim 10 wherein the first curve has a first arc length and the second curve has a second arc length, each curve being disposed from the distal end of its corresponding tube or element respectively a distance no greater than three times the smaller of the first and second arc lengths, further including the step of separating the first and second curves in operation by no more than three times the smaller of the first and second arc lengths.

19. The method of using a combination catheter having a catheter tube and an inner medical element, said combination catheter having a proximal end and a distal end, the method comprising:

disposing a catheter tube in a human body, said catheter tube having a distal end portion fixed in a first curve such that the distal end portion of the catheter tube defines a first plane;

disposing an inner medical element in the catheter tube, said inner medical element having a distal end;

forming the combination catheter into a shape in which the distal end of the combination catheter is disposed substantially out of the first plane for a period of time sufficient to permit medical use of at least one of the catheter tube or the inner medical element.

20. The method of using a combination catheter as set forth in claim 19 further including the step of positioning the combination catheter in a desired position, and using the combination catheter in a medical procedure while the distal end of the combination catheter is disposed substantially out of the first plane.

21. The method of using a combination catheter as set forth in claim 20 further including the step of reforming the distal end of the combination catheter into a substantially different shape.

22. The method of using a combination catheter as set forth in claim 21 further including the step of using the combination catheter in a medical procedure while the distal end of the combination catheter is in the reformed shape.

23. The combination catheter as set forth in claim 1 further including means for proximally fixing the distal end portion of the inner medical element in the second curve.

24. The method as set forth in claim 19 further including proximally fixing the distal end of the combination catheter substantially out of the first plane.

25. The combination catheter as set forth in claim 1 further including means for proximally fixing the inner medical element against translation and rotation with respect to the catheter tube.

26. The method as set forth in claim 19 further including proximally fixing the inner medical element against translation and rotation with respect to the catheter tube.

27. A combination catheter comprising:

a catheter tube having a distal end portion fixed in a first curve such that the distal end portion of the catheter tube defines a first plane;

an inner medical element having a distal end portion extending proximally from the distal end of the inner medical element, said distal end portion of the inner medical element adapted to be fixed in a second curve such that the distal end portion of the inner medical element is disposed substantially out of the first plane; and

means for proximally fixing the inner medical element against translation and rotation with respect to the catheter tube.

28. The method of using a combination catheter having a catheter tube and an inner medical element, said combination catheter having a proximal end and a distal end, the method comprising:

disposing a catheter tube in a human body, said catheter tube having a distal end portion fixed in a first curve such that the distal end portion of the catheter tube defines a first plane;

disposing an inner medical element in the catheter tube, said inner medical element having a distal end;

forming the combination catheter into a shape in which the distal end of the combination catheter is disposed substantially out of the first plane for a period of time sufficient to permit medical use of at least one of the catheter tube or the inner medical element; and

proximally fixing the inner medical element against translation and rotation with respect to the catheter tube.

29. The method of using a combination catheter having a catheter tube and an inner medical element, said combination catheter having a proximal end and a distal end, the method comprising:

disposing a catheter tube in a human body, said catheter tube having a distal end portion fixed in a first curve such that the distal end portion of the catheter tube defines a first plane;

disposing an inner medical element in the catheter tube, said inner medical element having a distal end;

forming the combination catheter into a first shape in which the distal end of the combination catheter is disposed substantially out of the first plane for a period of time sufficient to permit medical use of at least one of the catheter tube or the inner medical element;

proximally fixing the inner medical element against translation and rotation with respect to the catheter tube while the distal end of the combination catheter is disposed substantially out of the first plane;

forming the combination catheter into a second shape, different from the first shape, in which the distal end of the combination catheter is disposed substantially out of the first plane for a period of time sufficient to permit medical use of at least one of the catheter tube or the inner medical element;

proximally fixing the inner medical element against translation and rotation with respect to the catheter tube while the distal end of the combination catheter is disposed in the second shape.

30. A combination catheter comprising:

a catheter tube having a distal end portion fixed in a first curve such that the distal end portion of the catheter tube defines a first plane;

an inner medical element having a distal end portion extending proximally from the distal end of the inner medical element, said distal end portion of the inner medical element fixed in a

second curve defining a second plane, such that the second plane defined by the distal end portion of the inner medical element is disposed substantially out of the first plane; and

means for proximally fixing the inner medical element against translation and rotation with respect to the catheter tube while the distal end portion of the inner medical element is disposed substantially out of the first plane.

31. The method as set forth in claim 10 wherein the second curve is disposed substantially out of the first plane by rotating the inner medical element with respect to the catheter tube.

32. The method as set forth in claim 19 wherein the forming step includes rotating the inner medical element with respect to the catheter tube.

33. The method as set forth in claim 10 wherein the step of fixing includes proximally fixing the distal end of the combination catheter substantially out of the first plane.

34. The method as set forth in claim 10 wherein the step of fixing includes proximally fixing the inner medical element against translation and rotation with respect to the catheter tube.